

REMARKS

The changes to the above claims have been made so as to eliminate multiple claim dependencies and to present claim language more conventional for practice in the United States including presentation of correct grammar and verb tense. These changes do not introduce new matter, nor do they narrow the subject matter of the claims presented and examined in the corresponding International Application.

Respectfully submitted,

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Marked up version of amended claims

1. An oligonucleotide molecule for the detection of *Giardia lamblia* (*G. lamblia*), wherein the oligonucleotide molecule hybridises under medium to high stringency conditions to unique 18S rDNA/rRNA sequences of *G. lamblia*.

3. The oligonucleotide molecule according to claim 1 [or 2] selected from the group consisting of oligonucleotides having the following nucleotide sequences:

GCG TCC CGG GTG AGC GGG (SEQ ID NO: 1):

GCC CGC GGG CGC CCG CCC (SEQ ID NO: 2)

TGG GCC CGC CTC GCT CGC (SEQ ID NO: 3):

CGG CGG GGG GCC AAC TAC (SEQ ID NO: 4):

GCG GGT CCA ACG GGC CTG (SEQ ID NO: 5):

CGG GGC TGC CGC GGC GCG (SEQ ID NO: 6): and

oligonucleotides comprising a part of the sequences above having at least ten bases which hybridise to unique rDNA/rRNA sequences of *G. lamblia*.

6. The oligonucleotide molecule according to [any one of] claim[s] 1 [to 5] being detectably labelled.

9. The oligonucleotide molecule according to claim 7 wherein the fluorochrome is selected from the group consisting of fluorescein isothiocyanate, also known as [(] FITC. green[)], cyanine dyes Cy2, Cy3, Cy3.5, Cy5, Cy5.5 that range [(ranging] from green to far red[)], and Texas Red.

10. A method for the detection of the presence of viable cells of *G. lamblia* in a sample comprising the steps of:

- (a) adding to the sample an effective amount of a probe consisting of a detectably labelled oligonucleotide molecule which hybridises under medium to high stringency conditions to unique 18S rDNA/rRNA sequences of *G. lamblia*:
- (b) creating and maintaining conditions effective for [allowing] hybridisation of the probe to the 18S rDNA/rRNA of any *G. lamblia* cells present in the sample; and
- (c) detecting hybridisation of the probe and *G. lamblia* nucleotides.

14. The method according to [any one of] claim[s] 10 [to 13] comprising detection via [is used in combination with] fluorescence *in situ* hybridization (FISH) in which the oligonucleotide probe is labelled with fluorochrome and after hybridisation, the resulting fluorescent-labelled cell is detected by epifluorescence microscopy or flow cytometry.

15. The method according to [any one of] claim[s] 10 [to 14] wherein [several] at least two different oligonucleotide probes are used and are distinguished by the use of different labels on each probe.

16. The method according to claim 15 wherein the oligonucleotide probes are labelled with different fluorochromes and are detected by flow cytometry.

17. The method according to [anyone of] claim[s] 10 [to 16] wherein the sample is an environmental sample.

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